

CLAIMS

1. A method of preparing an integrated circuit module for attachment to a printed circuit substrate comprising the steps of:

(a) providing a tape automated bonding (TAB) tape frame having a predetermined conductive test pad footprint formed about a perimeter of the TAB tape frame and a bond pad footprint generally centrally disposed relative to the test pad footprint, with conductive leads connecting the bond pads individually to the test pads and to ball grid array pads generally centrally disposed relative to the bond pad footprint;

(b) affixing a semiconductor die comprising an integrated circuit to the TAB tape frame, the integrated circuit having a plurality of input/output points within the bond pad footprint;

(c) wire bonding the input/output points of the integrated circuit to selected ones of the bond pads in the bond pad footprint;

(d) overmolding the semiconductor die and the bond pad footprint with a plastic to form said integrated circuit module; and

(e) performing testing and burn-in on the integrated circuit by connecting test probes to the conductive test pads in the test pad footprint;

2. The method of claim 1 and further including the steps of:

(a) applying solder balls to the ball grid array pads prior to the testing and burn-in step;

(b) cutting the TAB tape about the overmolded semiconductor die to extract the overmolded semiconductor die following the testing and burn-in step; and

(c) affixing the overmolded semiconductor die to a printed circuit substrate by means of the solder balls on the ball grid array.

3. A method of preparing an integrated circuit module for attachment to a printed circuit substrate comprising the steps of:

(a) providing a tape automated bonding (TAB) tape frame having a predetermined conductive test pad footprint formed about a perimeter of the TAB tape frame and a bond pad footprint generally centrally disposed relative to the test pad footprint, with conductive leads connecting the bond pads individually to the test pads and to ball grid array pads generally centrally disposed relative to the bond pad footprint;

(b) affixing at least two semiconductor dies, each comprising an integrated circuit to the TAB tape frame, the integrated circuits having a plurality of input/output points within the bond pad footprint;

(c) wire bonding the input/output points of the integrated circuits to selected ones of the bond pads in the bond pad footprint;

(d) overmolding the at least two semiconductor dies and the bond pad footprint with a plastic to form said integrated circuit module; and

(e) performing testing and burn-in on the integrated circuits by connecting test probes to the conductive test pads in the test pad footprint;

4. The method of claim 3 and further including the steps of:

(a) applying solder balls to the ball grid array pads prior to the testing and burn-in step;

(b) cutting the TAB tape about the overmolded semiconductor dies to extract the overmolded semiconductor dies following the testing and burn-in step; and

(c) affixing the overmolded semiconductor dies to a printed circuit substrate by means of the solder balls on the ball grid array.